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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,059	07/09/2003	Tomoaki Shoji	TOYA115.008AUS	4996

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EXAMINER

GORDON, BRIAN R

ART UNIT PAPER NUMBER

1743

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,059

Applicant(s)

SHOJI, TOMOAKI

Examiner

Brian R. Gordon

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date = _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed September 5, 2006 have been fully considered but they are not persuasive.

Applicant states that while Bass discloses in figure 5, somewhat overlapping drops, and superimposition of one drop over another is the goal. Such an argument is not commensurate in scope with that of the claims. The claims do not specify a level of overlap of the drops. The claim simply stated the drops are joined. Somewhat overlapping and complete overlapping constitute joining. In fact the claim is contradictory how can you have both drops that are apart or separate, but yet joined? In actuality as pointed out by applicant, the drops are deposited such that the drops are joined together at their respective outer peripheries. The claim does not specify such. It should further be noted that forming a single spot does not constitute a microarray.

Applicant has relied on a specified portion of Bass to assert the reference does not disclose the claimed invention. The teachings of the reference as a whole must be considered. While complete overlap would be perfect performance of the device and may be desired in reference to figure 5, Bass also recognizes that complete overlap does not always occur and a degree of tolerance is acceptable (column 2, line 63-column 64, line 13). So in other words the drops may not be deposited in the exact same location but yet still collectively join together to form an acceptable mixture.

For the reasons given herein the previous rejections based upon Bass are hereby maintained.

In view of applicant's arguments the rejection as based upon GB 215623 is hereby withdrawn.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The positions or proximity at which the drops are deposited is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The specification states the drops are deposited at positions in which the outer peripheries of the respective drops contact or are joined together.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-2, 5-7, 10, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Bass US 6,943,036.

Bass discloses a method, apparatus, and computer program product, for forming an addressable array of chemical moieties on a hydrophobic substrate using an inkjet head. The method may include, for each of multiple locations on the substrate, depositing a reagent drop set during a cycle so as to attach a corresponding moiety for that location. This may be repeated as required, until the addressable array is formed.

The method includes for each of multiple locations (sometimes referenced as "feature locations") on the substrate, depositing a reagent drop set during a cycle so as to attach a corresponding moiety for that location. The foregoing is repeated as required, until the addressable array is formed. In any event, for each of multiple locations, a multi-dispenser drop group (a plurality of drops) is deposited over one or more cycles for a corresponding feature location which group includes drops which are deposited from different dispensers.

As shown in figure 5, multiple drops are deposit at different locations and merge/overlap together on the substrate.

As to the arguments directed to the 103 rejection as based upon Bass, applicant states does not teach or suggest droplets which are applied to circles to form target locations nor arranging circles/droplets and joining the circles/droplets to adjust the size of the spot. In Bass, as seen in the figures the target locations to which the droplets are dispensed to are circular in shape and as stated above the drops are joined at this location and the level of overlap determines the size of the spot.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1743

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3-4, 8-9, and 11-13 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bass US 6,943,036.

While Bass does not specify imaging a square, Bass does disclose the invention realizes that drop dispenser errors may be evaluated by detecting (such as by imaging) one or more drops deposited by the dispenser onto the substrate during array fabrication. After detection corrective measures may be applied to dispense heads and drops are subsequently deposited at the target locations (circles). One can clearly see that if 4 target locations are imaged they may be in a square configuration.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, with 2nd and 4th F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



brg

BRIAN R. GORDON
PRIMARY EXAMINER